UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PETER JENS FORTH
and VEERIE LIEVE AN VANDE VYVERE

Appeal No. 2005-2728
Application 10/151,539

ON BRIEF

Before WARREN, OWENS and JEFFREY T. SMITH, *Administrative Patent Judges*.

WARREN, *Administrative Patent Judge*.

Decision on Appeal

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner finally rejecting claims 1, 11 and 20 through 30. Claim 12, the remaining claim of record, has been withdrawn from consideration by the examiner under 37 CFR § 1.142(b).

Claim 1 illustrates appellants' invention of a pouch made from a water-soluble film containing a detergent composition comprising a cyclic hydrotrope, and is representative of the claims on appeal:[1]

1. A pouch made from a water-soluble film, said pouch containing a detergent composition comprising a cyclic hydrotrope, wherein the detergent composition is a liquid laundry detergent composition and said composition comprises:

a) from about 0.25% to about 10%, by weight of the composition, of the hydrotrope, wherein the hydrotrope is selected from salts of cumene sulphonates and mixtures thereof;

[1] We reproduce claim 1 as it stands of record in the amendment filed September 15, 2003.

b) an anionic surfactant;

c) from 0.001% to 0.2% an enzyme; and

d a suds suppressor;

wherein the composition comprises up to 9%, by weight, water.

The references relied on by the examiner are:

Kennedy	4,973,416	Nov. 27, 1990
Le Nigen[2] (published FR Patent Application, France)	2,666,348	Mar. 6, 1992
Boutique et al. (Boutique) (published World Intel. Prop. Org. Application)	WO 01/10993	Feb. 15, 2001

The examiner has rejected appealed claims 1, 11, 20 through 24, 29 and 30 under 35 U.S.C. § 103(a) as being unpatentable over Kennedy in view of Le Nigen (answer, pages 4-6), and appealed claims 25 through 28 under 35 U.S.C. § 103(a) as being unpatentable over Kennedy in view of Le Nigen as applied to claim 1, further in view of Boutique (answer, pages 6-8).

Appellants argue the claims under each ground of rejection as a group. Thus, we decide this appeal based on appealed claims 1 and 25 as representative of the grounds of rejection. 37 CFR § 41.37(c)(1)(vii) (September 2004).

We affirm.

Rather than reiterate the respective positions advanced by the examiner and appellants, we refer to the answer and to the brief for a complete exposition thereof.

Opinion

We have carefully reviewed the record on this appeal and based thereon find ourselves in agreement with the supported position advanced by the examiner that, *prima facie*, the claimed pouch made from a water-soluble film containing a detergent composition comprising a cyclic hydrotrope encompassed by appealed claim 1 and the claimed detergent composition further comprises a C_5-C_{20} polyol encompassed by appealed claim 25 would have been obvious over the combined teachings of Kennedy and Le Nigen and the combined teachings of Kennedy, Le

[2] We refer to the translation of Le Nigen prepared for the USPTO by Diplomatic Language Services, Inc. in "October 2000" which was made of record by the examiner in the final rejection mailed April 14, 2004 (PTO-892).

Nigen and Boutique, respectively, to one of ordinary skill in this art at the time the claimed invention was made. Accordingly, we again evaluate all of the evidence of obviousness and nonobviousness based on the record as a whole, giving due consideration to the weight of appellants' arguments in the brief. *See generally*, *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984).

Appellants submit that "Kennedy states that less than 10% of water will tend to destabilize the composition and/or break down the film," pointing out that "[t]he pouches of the present invention, contain an amount of water (up to 9%) that would destabilize according to Kennedy" (brief, page 3). The examiner responds that the claimed "composition does not become patentable simply because it has been described as somewhat inferior to some other product for the same use," citing *In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1132 (Fed. Cir. 1994) ("We share Gurley's view that a person seeking to improve the art of flexible circuit boards, on learning from Yamaguchi that epoxy was inferior to polyester-imide resins, might well be led to search beyond epoxy for improved products. However, Yamaguchi also teaches that epoxy is usable and has been used for Gurley's purpose.") (answer, pages 5 and 9-10).

We find that Kennedy would have disclosed to one of ordinary skill in this art an aqueous laundry detergent contained in a pouch made from a water-soluble film, "comprising from about 10% to about 24% water" and that "[r]eduction in the water content to below about 10% *is possible*; however, at a level of less than 10% the liquid laundry detergent will tend to absorb moisture through the vapor-permeable water-soluble film" which "can destabilize the liquid laundry detergent and/or lead to a breakdown in the water-soluble film" (col. 1, ll. 54-57, and col. 2, ll. 55-61; emphasis supplied).

On this record, we agree with the examiner's position. Indeed, *Gurley* supports the examiner's position. Furthermore, we find that the teaching in Kennedy would have led one of ordinary skill in this art to experiment with a water content below 10%. *See generally*, *In re Geisler*, 116 F.3d 1465, 1470, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997) ("The statement in Zehender that '[i]n general, the thickness of the protective layer should not be less than about [100 Angstroms]' falls far short of the kind of teaching that would discourage one of ordinary skill in the art from fabricating a protective layer of 100 Angstroms or less."). In this respect, we

find that one of ordinary skill in the art would have reasonably expected little difference in properties between a water content of "about 10%" and the upper end of the claimed range of "up to 9%." *See Titanium Metals Corp. of America v. Banner*, 778 F.2d 775,783, 227 USPQ 773, 779 (Fed. Cir. 1985) ("[T]he Russian article discloses two alloys having compositions very close to that of claim 3, which is 0.3% Mo and 0.8% Ni, balance titanium. The two alloys in the prior art have 0.25% Mo - 0.75% Ni and 0.31% Mo - 0.94% Ni, respectively. The proportions are so close that prima facie one skilled in the art would have expected them to have the same properties.").

Appellants further submit that one of ordinary skill in this art would not have combined Kennedy and Le Nigen because "[t]here is nothing in Kennedy to suggest that there is a need for a particular cyclic hydrotrope to provide rapid dissolution, especially in light of the lowered amount of water in the present invention which as taught by Kennedy, would destabilize the composition and/or break down the film," and "[Le Nigen] does not provide any motivation to modify the Kennedy compositions to contain a particular cyclic hydrotrope or to reduce the amount of water in the laundry detergent up to 9%" (brief, page 3). The examiner responds that both references involve "liquid laundry detergent compositions in water-soluble pouches" and "Kennedy does teach that the liquid laundry detergent composition contains conventional cyclic hydrotropes[,] . . . including toluene, oxylene and/or cymene sulfonic acids" while Le Nigen teaches "conventional cyclic hydrotropes used in the art of liquid laundry detergent compositions in water-soluble pouches, such as toluene, cumene o xylene sulphonates," and concludes that one of ordinary skill in the art would have used any of these cyclic hydrotropes in the liquid detergents of Kennedy (answer pages 10-12).

We find that Kennedy would have taught one of ordinary skill in this art that "[c]onventional hydrotropes such as toluene, oxylene, and/or cymene sulfonic acids or their salts can also be used to improve the stability of the neutralized liquid laundry detergent in the presence or absence of a solvent system" (col. 2, ll. 43-48), and that Le Nigen would have taught that "the water soluble film consisting of polyvinyl alcohol may advantageously contain 1 to 20% by weight of a sulfonated hydrotropic agent selected from among the toluene-, cumene- or xylene-sulfonates of sodium, potassium, ammonium or an alkanolamine" (pages 6-7, bridging sentence).

On this record, we agree with the examiner's position. We find that the toluene-, cymene-, cumene- and xylene-sulphonates disclosed by the references are members of a subgenus of lower alkylbenzene sulphonates and the salts thereof, which one of ordinary skill would have found to be conventional hydrotropes as evinced by Kennedy and Le Nigen. Thus, one of ordinary skill in this art would have reasonably used any salt of cumene sulphonate in the liquid laundry detergents of Kennedy in the reasonable expectation that it would perform in the same or similar manner as the other conventional hydrotropes as taught in the reference. Indeed, Kennedy would have taught that any conventional hydrotrope, such as those of the references can be used. *See In re Corkill*, 771 F.2d 1496, 1497-1500, 226 USPQ 1005, 1006-08 (Fed. Cir. 1985). Thus, contrary to appellants' contention, one of ordinary skill in this art would have been motivated to combine Kennedy and Le Nigen in the manner relied on by the examiner.

Finally, appellants contend that the combined teachings of Kennedy, Le Nigen and Boutique does not "teach the use of a [C_5-C_{20}] polyol wherein at least two polar groups are separated from each other by at least 5 carbon atoms" as required by appealed claim 25, because "neither Kennedy nor [Le Nigen] contain any suggestion or motivation to one of ordinary skill to suggest that such a modification would be useful or desirable" and Boutique "does not suggest the hydrotropes [disclosed therein] would be useful in a composition contained within a water soluble pouch" (brief, pages 3-4). Appellants contend that this is because as "seen from the teachings of [Le Nigen] and Kennedy, compositions that are useful in conjunction with a water-soluble pouch are more sensitive to actives and water content than compositions that may be poured from a bottle, or other container" (*id.*, page 4). The examiner responds that "the three references are analogous . . . as all three are concerned with liquid laundry compositions," pointing out that "Kennedy specifically teaches that a polyol is added to the liquid laundry detergent" and that "whether . . . from a bottle or used in conjunction with a water-soluble pouch, one of ordinary skill in the art would still be concerned with providing the liquid detergent with improved dilution profile and dissolution behavior because those properties will determine how the detergent reacts in water prior and during the laundering of fabrics, which all three references are concerned with" (answer, pages 12-13).

On this record, we agree with the examiner's position. We find that Kennedy would have taught one of ordinary skill in this art that a polyol can be used in the solvent system for a liquid

detergent along with or in place of an alkanol, and while the reference states a preference for propylene glycol, which has a C_3 between two hydroxy groups, it would have taught that "[a] particularly suitable solvent system comprises ethanol and a polyol in addition to water. . . . Any polyol containing 2 to 6 carbon atoms and 2 to 6 hydroxy groups can be used" (col. 2, ll. 37-39 and 49-50, col. 5, ll. 11-19, and col. 6, ll. 13-14). Thus, Kennedy would have taught polyols containing a C_5 or a C_6 between two hydroxy groups, and Boutique would have disclosed such compounds to one of ordinary skill in the art as hydrotropes for liquid detergent compositions (pages 5-6). Indeed, Kennedy would have directed one of ordinary skill in the art to use the hydrotropes of Boutique. *See In re Kerkhoven*, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980), and case cited therein ("It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. In re Susi, . . . 440 F.2d 442, 445, 169 USPQ 423, 426 ([CCPA] 1971); In re Crockett, . . . 279 F.2d 274, 276-77, 126 USPQ 186, 188 ([CCPA] 1960). As this court explained in Crockett, the idea of combining them flows logically from their having been individually taught in the prior art."); *In re Castner*, 518 F.2d 1234, 1238-39, 186 USPQ 213, 217 (CCPA 1975) ("We agree with appellant that not every ingredient is shown in a single prior art reference. However, when the ingredients are associated in an obvious manner set forth in the claims, they do not co-act with each other in any new or unexpected way and define nothing patentable over the prior art. [Citation omitted.]").

Accordingly, based on our consideration of the totality of the record before us, we have weighed the evidence of obviousness found in the combined teachings of Kennedy and Le Nigen and the combined teachings of Kennedy, Le Nigen and Boutique with appellants' countervailing evidence of and argument for nonobviousness and conclude that the claimed invention encompassed by appealed claims 1, 11 and 20 through 30 would have been obvious as a matter of law under 35 U.S.C. § 103(a).

The examiner's decision is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a)(1)(iv) (September 2004).

AFFIRMED

CHARLES F. WARREN Administrative Patent Judge	)	
TERRY J. OWENS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
JEFFREY T. SMITH Administrative Patent Judge	)	

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